SQL Assignment

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[Document subtitle]

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**SQL ASSIGNMENT**

In this assignment we create a database, employees\_info, under that two tables are created – employees and departments.

* **Employees Table**

|  |  |  |  |
| --- | --- | --- | --- |
| **ID** | **NAME** | **AGE** | **DEPARTMENT \_ID** |
| 1 | Alice | 25 | 1 |
| 2 | Bob | 30 | 2 |
| 3 | Charlie | 35 | 2 |
| 4 | David | 40 | 3 |
| 5 | Eve | 45 | 3 |
| 6 | Frank | 50 | 3 |

Employees table comprises of four rows – id, name, age and respective department id. There are six employees.

* **Departments Table**

|  |  |
| --- | --- |
| **DEPARTMENT\_ID** | **NAME** |
| 1 | Sales |
| 2 | Marketing |
| 3 | Engineering |

Department table comprises of two rows – id and name of the departments.

1. **Using the SQL query, we create the database and make the two tables.**

CREATE DATABASE employees\_info;

use employees\_info;

CREATE TABLE employees(

id INT PRIMARY KEY,

name VARCHAR(50),

age INT,

department\_id INT

);

INSERT INTO employees (id, name, age, department\_id) VALUES

(1, 'Alice', 25, 1),

(2, 'Bob', 30, 2),

(3, 'Charlie', 35, 2),

(4, 'David', 40, 3),

(5, 'Eve', 45, 3),

(6, 'Frank', 50, 3);

CREATE TABLE departments (

id INT PRIMARY KEY,

name VARCHAR(50)

);

INSERT INTO departments (id, name) VALUES

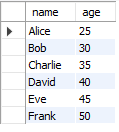
(1, 'Sales'),

(2, 'Marketing'),

(3, 'Engineering');

1. **Now a SQL query to display the names and ages of all employees in the “employees” table:**

SELECT name, age FROM employees;

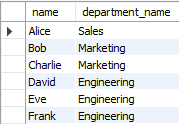


1. **SQL query to display the names and departments of all employees in the “employees” table**

SELECT employees.name, departments.name AS department\_name

FROM employees

JOIN departments ON employees.department\_id = departments.id;



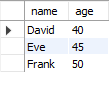
1. **SQL query to display the names and ages of all employees who work in the “Engineering” department.**

SELECT employees.name, employees.age

FROM employees

JOIN departments ON employees.department\_id = departments.id

WHERE departments.name = 'Engineering';



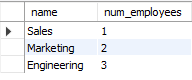
1. **SQL query to display the names of all the departments along with the total number of employees in each department.**

SELECT departments.name, COUNT(employees.id) AS num\_employees

FROM departments

LEFT JOIN employees ON departments.id = employees.department\_id

GROUP BY departments.name;



1. **SQL query to display the names of all employees who work in the same department as “Charlie”**

SELECT employees.name

FROM employees

JOIN departments ON employees.department\_id = departments.id

WHERE departments.name = (

SELECT departments.name

FROM employees

JOIN departments ON employees.department\_id = departments.id

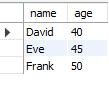
WHERE employees.name = 'Charlie'

);



1. **SQL query to display the names and ages of all employees who are older than 35.**

SELECT name, age FROM employees WHERE age > 35;



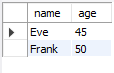
1. **SQL query to display the names and ages of all employees who work in the “Engineering” department and are older than 40.**

SELECT employees.name, employees.age

FROM employees

JOIN departments ON employees.department\_id = departments.id

WHERE departments.name IN ('Sales', 'Marketing');



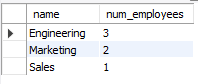
1. **SQL query to display the names of all the departments along with the total number of employees in each department, sorted by the number of employees in descending order.**

SELECT employees.name, employees.age

FROM employees

JOIN departments ON employees.department\_id = departments.id

WHERE departments.name = 'Engineering' AND employees.age > 40;



1. **SQL query to display the names and ages of all employees who work in the “Sales” or “Marketing” department.**

SELECT employees.name, employees.age

FROM employees

JOIN departments ON employees.department\_id = departments.id

WHERE departments.name IN ('Sales', 'Marketing');

